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ABSTRACT

A practicum addressed the problem of reading comprehension skills in low achieving students by monitoring their progress utilizing precision teaching. Based on referrals from classroom teachers, guidance counselors, and parents, five students ranging in ability levels from kindergarten through grade 8 were accepted into the program for one or more 8-week tutorial sessions. An individualized learning plan, based on precision teaching principles, was designed for each student's specific needs. Students were introduced to precision teaching, task sheets, and several learning strategies. Results revealed an improvement in reading comprehension for most of the students in the target group. It was concluded that individualized remediation plans, continuous monitoring of students' progress, and daily charting of the results of utilizing precision teaching facilitated students' learning. (Appendixes include student profiles, analysis of progress, sample assignments, task sheets, and logarithmetic charts.) (Author/MG)

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UTILIZING PRECISION TEACHING TO MEASURE GROWTH OF READING COMPREHENSION SKILLS IN LOW ACHIEVING STUDENTS

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by
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A Practicum Report
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fulfillment of the requirements for the degree of
Educational Specialist

The abstract of this report may be placed in a national database system for reference.

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Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

Signed Joanne M Ritter

Abstract

Utilizing Precision Teaching to Measure Growth of Reading Comprehension Skills in Low Achieving Students. Nittl, Joanne M., 1989: Practicum Report, Nova University, The Center for the Advancement of Education. Descriptors: Comprehension/Precision Teaching/Corrective Feedback/Motivational Strategies/Direct Monitoring/Individualized Instruction/Mastery Learning/Learning Strategies/Multisensory Techniques/VAKT/NIM.

Improvement of reading comprehension skills in low achieving students was addressed by monitoring their progress utilizing precision teaching. Screening devices such as interest inventories, learning styles indicators, and skill based probes were administered to solicit background information. Individualized remediation plans were developed based on the results of the screening instruments and skill development needs. Students were introduced to precision teaching (daily timings and charting), task sheets, and several learning strategies. Results revealed an improvement in reading comprehension for most of the students in the target group. It was concluded that individualized remediation plans, continuous monitoring of students' progress, and daily charting of results utilizing precision teaching facilitated students' learning. Appendices include student profiles, analysis of progress, sample assignments, task sheets, and logarithmetic charts.

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Practicum Title Utilizing Precision Teaching to Measure Growth of Reading Comprehension Skills in Low Achieving Students

Student's Name Joanne M. Nitti

Program Site Super Marks Date December, 1989

Observer's Name Robin Mendelson Robin Mendelson
(please print---------and sign)

Observer's position Teacher Phone # 475-7563

Observer's comment on impact of the project (handwritten):

Joanne created stimulating and exciting activities to help enhance her students achievement. Her student were always enthusiastic and were successful in their work.

CHAPTER I

Purpose

Setting

The setting for this practicum was an after school, individualized, tutorial program. The tutorial program, which was affiliated with a private university, was designed to remediate skill deficits of students with learning disabilities and to assist students experiencing difficulty in their regular classroom settings. Based on referrals from classroom teachers, guidance counselors and parents, students ranging in ability levels from kindergarten through grade eight were accepted into the program for one or more eight week tutorial sessions. Students met after school for two 1 hour sessions per week and were instructed by certified teachers pursuing advanced educational degrees. An individualized learning plan, based on precision teaching principles, was designed for each student's specific needs.

This practicum began in January, 1989 and continued for two 8 week sessions through June, 1989. A program administrator and five female teachers also participated in the 16 week session.

Student Profiles

Ann S., a 17 year old white female functioning on the fourth grade level, attended the eleventh grade at a local public high school. An only child, she resided with her mother who worked full time. Ann was enrolled in Specific Learning Disabilities (SLD) classes since the time she attended elementary school and continued in special education classes in high school. Ann was enrolled in the tutorial program by her mother who was concerned about her progress in reading. Although no psychological evaluation was available for this student, results from the Florida Statewide Assessment Test (SSAT II) disclosed that Ann mastered only six out of the fifteen communication skills tested. Based on parent and teacher conferences and results of preliminary tests as outlined in TABLE I (Appendix A), it was determined that remediation in reading survival skills would benefit Ann. Therefore, during the 16 week session, Ann was instructed in the following skills: (a) identifying the main idea of a paragraph, and (b) increasing reading fluency.

Kit S., a 15 year old white male eighth grade student, attended a private religious school. Kit, the oldest of three children, resided with both parents. Kit was referred to the tutorial program due to his lack

of success in the regular classroom setting. Although no psychological evaluation was available for Kit, it was determined that he did not exhibit any learning disabilities. Based on parent and teacher input and results of preliminary tests as outlined in TABLE I (Appendix A), the skill areas targeted for remediation were: (a) reading comprehension by paraphrasing, and (b) reading fluency.

Craig K., a 12 year old white male fifth grade student, attended a public school. He resided with both parents and a younger sibling. Results from Craig's psychological evaluation diagnosed him as a Specific Learning Disabilities (SLD) student. His mother enrolled him in the part-time SLD program at his school for one year. However, due to scheduling problems which caused the student to miss some of his daily instruction in the regular classroom, his hours were reduced to zero, thus, still maintaining his eligibility for the SLD program in the future. Results from Craig's psychological testing also indicated that a significant discrepancy existed between his ability and achievement. Test results further disclosed that he was of average intelligence and was experiencing academic difficulties in reading. The student's full scale I.Q. on the Wechsler Intelligence Scale for Children - Revised

(WISC-R) was 95 and his reading level was determined to be at approximately the fourth grade level. Based on results of preliminary tests administered by the writer, as outlined in TABLE I (Appendix A), the following skill areas were targeted for remediation: (a) determining specific context clues, and (b) locating the main idea of a paragraph.

Jennifer S., an 8 year old white female, attended a private religious school. She resided with both parents and two younger siblings. No psychological evaluation was available for the student. However, based on information provided by the child's mother and results of preliminary tests administered by the writer as outlined in TABLE I (Appendix A), it was determined that the student would benefit from remediation in reading skills. The skills Jennifer received remediation in were: (a) reading fluency, and (b) locating the main idea of a paragraph.

Kelly J., a 10 year old white female, was enrolled in the fourth grade at a local public school. She resided with both parents and an older sibling. Kelly was enrolled in the tutorial program by her parents for more than one year and also attended the summer tutorial program. Psychological testing revealed that Kelly was of high average intelligence. She did not exhibit any

processing difficulties and therefore, did not qualify for any special programs offered at her elementary school. Results from the Wide Range Achievement Test (WRAT), which was administered approximately one year ago, indicated that Kelly was performing below grade level in all areas of reading. Based on data acquired from Kelly's classroom teacher and from preliminary tests as outlined in TABLE I (Appendix A), locating the main idea was determined to be the skill area in need of remediation.

Objectives

As evidenced by the results of the preliminary tests administered, all students in the target group necessitated remediation in reading comprehension skills. The following outcome objectives were anticipated for each participant after instruction:

Ann S., Craig K., Jennifer S., and Kelly J.:

1. Given a set of five paragraphs at the appropriate grade level, each student will correctly circle the main idea of each paragraph in one minute.

Ann S., Kit S., and Jennifer S.:

2. Given a story at the appropriate grade level, each student will correctly read 130 to 150 words in one minute.

Kit S.:

3. After reading a short story at the eighth grade level, the student will correctly paraphrase the selection by writing eight or nine details in five minutes.

Craig K.:

4. Given a set of 20 fifth grade sentences containing context clues, the student will correctly underline 18 to 20 definitions in one minute.

The researcher:

5. The researcher's knowledge of academic methods will increase by 50 points as measured by a pretest and posttest.

CHAPTER II

Research and Solution Strategy

A review of the professional literature clearly indicated a concern among educators regarding the need to improve students' reading comprehension skills. Peters and Lloyd (1987) estimated that approximately 40 percent of all school children have trouble with reading comprehension. According to Pearson, as quoted by Baumann (1983), "comprehension is an idea whose time has come." The literature also revealed a variety of educational philosophies, instructional techniques, and specific teaching strategies which can be used to improve students' reading comprehension skills.

Success in reading comprehension involves mastery of a myriad of prerequisite skills such as vocabulary background, decoding skills, a prior knowledge base, and the development of specific cognitive processes. The research further implied that certain characteristics and principles for developing effective reading comprehension programs are necessary. Instructional methods and educational materials play an important role in developing a successful reading comprehension program.

According to Baumann (1983), six princples should be considered when developing an effective reading comprehension program:

1. Teach Relevant Skills: Instruction should include skills which will directly help the students better understand what they are reading.
2. Proceed From Simple To Complex: Teachers should train students on a simple target task and then move on to more complex procedures.
3. Provide Enough Instruction: Research has shown that the more time allotted to reading instruction, the greater the level of achievement.
4. Administer Direct Instruction: Instruction should focus on clear goals, continuous monitoring of students' performance, and provide immediate corrective feedback.
5. Provide Teacher-Directed Application: Students should be able to transfer acquired skills to new settings.
6. Require Independent Practice: Provisions should be made to allow students to practice and reinforce the skills taught.

Treiber and Lahey (1983) also found that utilizing a behavioral approach for the remediation of skill deficits is effective. Three characteristics must be present for an effective academic remediation program. These characteristics include: (a) individualization and mastery learning, (b) direct teaching, and (c) emphasis on measurement.

Instructional Strategies

Several instructional strategies for improving reading comprehension which reflect the characteristics of an effective remedial reading program were investigated. Koenke (1988) concluded from researching 79 Chapter I reading programs that the most effective instructional practices for improving reading comprehension included the use of timed readings, skill practice materials, daily reading of easy material, flash card drills, and modeling. In order for drills with flash cards to be effective in remedial instruction they must be brief, frequent, and fast-paced (Obrand, 1989). Practice and drill of unknown vocabulary words should be used for only one or two minutes per session. Drill activities should be paced throughout the lesson at frequent intervals.

Neurological Impress Method

The research also disclosed that the Neurological Impress Method (NIM) is an effective strategy for improving reading comprehension. Initially, NIM was developed primarily to improve word recognition skills and reading fluency. According to research conducted by Henk (1983), however, students' general reading comprehension improved as well when using NIM. In another study conducted by Strong and Yurek (1986), utilizing the NIM with elementary school children resulted in improved reading fluency and reading comprehension. In NIM, the student and teacher read in unison for several minutes. The teacher proceeds at a pace faster than the student. As the two read, the teacher's voice is directed toward the student's right ear. While reading, the teacher's finger slides along under the words that are being spoken. By utilizing this method, the student sees, hears, and pronounces words simultaneously as modeled by the teacher. This provides the student with constant reinforcement of letter-sound associations.

Method of Repeated Reading

Another effective strategy for improving reading comprehension is the Method of Repeated Reading (MRR).

This method, which is similar to NIM, requires the student to re-read a short, meaningful passage several times until a satisfactory level of fluency is reached. The MRR is based on the theory of automatic information processing. According to this theory, fluent readers decode automatically leaving their attention free for comprehension. Based on research conducted by Kann (1983), when the MRR was used as an adjunct to regular instruction with elementary school children, significant gains were made in reading comprehension and reading speed. A method similar to MRR, known as the "talking book" method was also used successfully with LD students. In the "talking book" method, the teacher tapes entire books and students listen and read to the cassette tape. Both methods improve reading fluency, comprehension, attitudes and motivation for the disabled reader (Kann, 1983).

VAKT

Another multisensory approach for teaching reading is VAKT which includes the use of visual, auditory, kinesthetic, and tactile relationships of letters or words. Based on research conducted by Thorpe and Borden (1985), when VAKT was used with primary LD students the results indicated that multisensory instruction is

successful. Their study disclosed that on-task behavior increased and more learning occurred.

Self-Questioning Techniques

Self-questioning techniques have proven to be another effective method for improving reading comprehension skills in elementary school children. A self-questioning strategy was imployed by Clark, et. al (1984) with elementary LD students. The strategy consisted of three steps:

1. Read the passage and ask "WH" questions.
2. Answer the questions while reading.
3. Mark the answers with the appropriate symbol.

Before the students applied the strategy, they were provided with examples of each "WH" question: who, what, where, when, and why. Symbols were identified for each type of question to enable students to appropriately mark their answers when located in the text. Results of the experiment utilizing self-questioning techniques disclosed that five of the six LD students in the study group improved their reading comprehension on posttests.

Nolte and Singer (1985) conducted research utilizing the concept of "active comprehension instruction" with nine and ten year olds. Nolte and

Singer hypothesized that "active comprehension instruction" places the focus of control on the students and enables the students to learn a reading process that will help them achieve self-defined goals. Students in the group were trained to ask their own questions before, during, and after reading stories. Instruction included the kinds of questions to ask in order to achieve a specific goal and how to search for the appropriate answers in the reading material. The data from this study indicated that "active comprehension" enhances comprehension on the passages studied, and general comprehension is improved when this technique is transferred to other reading material.

R.A.P.

Paraphrasing is an important process in the development of students' reading comprehension. Students are often able to read a particular passage but are unable to express the material in their own words. The instructional strategy known as R.A.P. is a procedure developed to assist students in learning how to paraphrase material and to strengthen reading comprehension skills. The R.A.P. technique consists of the following three steps:

1. "R" - Read two paragraphs.

2. "A" - Ask yourself what you just read.

3. "P" - Put in your own words.

This procedure enables students to internalize what has been read and is effective for developing comprehension in all content areas.

Advance Organizers

Research has indicated that the use of advance organizers or task sheets is another effective technique to facilitate learning. The concept of advance organizers was first introduced in 1960 and refers to activities that the instructor will use prior to actual instruction. Lenz (1989) stated that using advance organizers at the beginning of a lesson sets the stage for the learner and provides structure to the lesson. Advance organizers often provide a lesson framework, list concepts to be taught, provide a sequence to instruction, and state anticipated goals or outcomes. Modifications to the advance organizer or task sheet are made according to individual student needs, skill development, and maturity level.

Precision Teaching

Although many strategies are available to improve students' reading comprehension, research has shown that it is also important for teachers to utilize some type

of monitoring system to measure students' progress and to make adaptations in the instructional program when necessary. An effective monitoring system for measuring students' learning and proficiency of skills is known as precision teaching or precision measurement. According to Metusky and Tango (1980), precision teaching is a counting of movements per minute of a chosen activity (behavior). The counting is done daily and the number of movements is recorded on a logarithmic chart to enable both the teacher and student to see, discuss, and evaluate performance.

Precision teaching is based on the work of Dr. Ogden Lindsay who applied the principles of operant conditioning developed by B. F. Skiner to the management of instruction. The fundamental principle of precision teaching is that the learner knows best. If the child is progressing, the program is right for the child. If the child is not progressing, the program is inappropriate and should be adjusted.

Precision teaching is comprised of three main characteristics: (a) it is a direct measure of student's progress; (b) it is a continuous or daily measure of progress; and (c) it uses rate or frequency of response within a set time limit. The five

components to the precision teaching technique are: (a) pinpointing, (b) counting and recording, (c) setting aims, (d) charting, and (e) decision making.

Pinpointing is choosing an academic or social behavior that needs to be changed. The behavior must be observable, repeatable, and have a start and end. The behavior must also be stated in observable terms.

After the teacher chooses a behavior, the counting period must then be determined. In precision teaching, the unit of measure most often used is "frequency per minute." Frequency per minute is the number of behaviors occurring during a one minute timing.

The next component is setting aims for the individual student. An aim is a goal set within a specific range to allow for individual student differences and to enable students to reach their highest potential.

Charting student progress is another important aspect of the precision teaching method. Charting provides both the student and the teacher with a visual picture of the progress being made. In precision teaching, charting is done on a semi-logarithmetic chart, which reflects proportional change or growth. In this way, a more accurate picture of the learning taking place is provided.

As a result of charting the student's progress, the teacher is able to make decisions regarding the student's academic program. Decisions may include changing the skill to an easier or more difficult one, breaking the skill into smaller components, changing the instructional method, or adjusting the learning environment.

Many instructional strategies and methods are available to develop students' reading comprehension skills. Vocabulary development, skill practice, and drill are often used effectively. Timed readings and reinforcement activities also facilitate the development of reading comprehension. Using such techniques appropriately will ultimately result in success for the students.

CHAPTER III

Method

Prior to beginning the tutorial sessions with the students several inservice meetings were attended. The meetings were designed to introduce the goals of the tutorial program and to become familiar with program procedures and requirements to be utilized during the 16 week session. The program administrator outlined the concept of precision teaching, specific terms unique to precision teaching, and shared teaching techniques to be used for student instruction. A pretest was administered to assess knowledge of pertinent academic methods. A posttest was also given to measure learning during the course of the implementation period. During the 16 week session, weekly inservices were held to discuss additional teaching techniques, to investigate instructional methods and materials, to determine each student's progress, and to make adjustments in student's individualized programs when necessary.

At the initial tutorial session each student's needs were assessed. Interest inventories, creative writing samples, and informal skill-based tests (probes) were administered to each student as a means of developing individual student profiles. In order to

obtain a more complete profile of each student, input from each student's classroom teacher and parents was solicited. Student records were analyzed. The results of these assessments made it possible to identify skill deficits for all five students and to determine a common skill deficit in which to focus instruction.

At the initial tutorial session, students were also provided with the program's operational procedures. Each student was given a specially prepared folder. The organization of the folder was explained to each student. The left hand side of each student's folder contained a daily task sheet, a probe for each skill, and a logarithmetic chart for each skill. A task sheet (Appendix B) is a prioritized list of the student's daily assignments. The task sheets served as an advance organizer and provided the student with a preview of the expectations of each tutorial session. Each student's task sheet began with an enabling activity. An enabling activity is an exercise in the form of an educational game, written assignment, or drill which provides practice for one of the targeted skills. The enabling activity, itself, was located in the right hand folder pocket. Each enabling activity was immediately followed by a probe (Appendix C) or a one minute test of the targeted skill. Each probe was identified on the task

sheet with a colored dot which corresponded to the colored dot on the actual probe. The student's task sheet alternately listed an enabling activity and a probe for each targeted skill. Following each probe was a logarithmetic chart (Appendix D) for each targeted skill. The logarithmetic chart was also color coded by skill. The color coding of each targeted skill on the task sheet, probe, and logarithmetic chart kept each student organized, enabled him/her to locate materials readily, and allowed for more efficiency during each tutorial session.

Each logarithmetic chart contained a data box on the right hand side, a grid, a place for the student's name and targeted skill, and a place to indicate the aim or goal for skill mastery. The data box was used to record the student's scores from the daily timings. The number of correct responses was written over the number of incorrect responses. These figures were then transferred to the logarithmetic chart. The vertical lines on the logarithmetic chart represented the days of the week; the horizontal lines represented the rate of responses per minute. A dot represented the number of correct responses; an "X" represented the number of incorrect responses. A line was used to connect the dots and another line was used to connect the X's. This

provided each student with a visual representation of his/her progress for each skill.

Mastery level aims for each student were determined by suggested performance standards, grade level ability, median performance of similar students, and the performance of an adult divided by two-thirds. Each student's weekly aim was derived by multiplying each student's number of correct items at the end of the week by 1.2. This formula provided a 20 percent increase in each student's weekly aim. The weekly aim for each skill was written on the task sheet along side the corresponding probe.

Although a remediation plan targeting individual skill deficits was developed for each student participant, it was determined that all of the students necessitated remediation in reading comprehension. Specifically, the two areas of focus for all student participants were locating the main idea of a paragraph and increasing reading fluency.

Neurological Impress Method

In order to increase reading fluency, Ann, Kit, and Jennifer were introduced to the Neurological Impress Method (NIM). When using this method, each student was seated slightly in front and to the left of the

instructor. The instructor and student read the same material simultaneously aloud while the instructor pointed to each word. The instructor's voice was slightly louder than the student's. Reading speed was increased gradually. Materials were chosen from the student's basal reader at one grade level below the student's instructional reading level. Words missed by each student were noted for later remediation and practice. NIM was used for a few minutes at every session. Higher level reading materials were periodically introduced to each student.

Kina-writing

To assist Kit, Jennifer, and Ann in identifying mispronounced words or unfamiliar words noted during NIM, the kina-writing technique, a form of VAKT, was introduced. This technique enabled the students to practice unknown words and to increase reading fluency. Each student's unknown words were copied on a 4 1/4 inch by 11 inch strip of white tagboard. These strips were called kina-cards (Appendix E). Each word was written in an exaggerated form. Since the students were in the intermediate grades, they were instructed to write the word in a sentence on the back of the kina-card rather than drawing a picture of the word. After writing the

word in a sentence, each student turned the card over and traced the unfamiliar word three times using three different colored markers. As each student traced words, each student was reminded to keep his/her elbows off the table. After tracing, the words were said aloud and then written on the chalkboard while the student's eyes were closed. If the word was incorrectly written, it was re-written. Each student's kina-cards were filed in a separate box for use as flash cards to reinforce individual vocabulary skills during later sessions.

R.A.P.

Kit was the only student in the target group who needed remediation in paraphrasing short stories. After explaining the term "paraphrasing", Kit was introduced to the R.A.P. technique. The steps of this technique were printed on a 5 x 8 index card which Kit placed in his folder for quick reference whenever necessary (Appendix F). Kit was introduced to a short story every two sessions (Appendix G). At the first session, he read the story and used R.A.P. to list details of what was read. At the next session, Kit re-read the story and was required to paraphrase it within the allotted time.

Context Clues

Craig was the only student in the group whose targeted skill was using specific context clues to determine word meanings. The material to develop context clues was taken from the reading text that Craig used in class, making the exercises more meaningful. The term "context clue" was explained to Craig as taking the form of synonyms, antonyms, examples, and non-examples. As an enabling activity for this skill, several sentences each containing an underlined unknown word were provided (Appendix H). The student circled all words in the sentence which related to the meaning of the unknown word and determined whether the circled words were synonyms, antonyms, or examples. The dictionary was consulted to determine the meaning of words that were unfamiliar to Craig.

Questioning Strategies

Ann, Craig, Jennifer, and Kelly needed remediation in determining the stated main idea of a short paragraph. Short paragraphs at each student's appropriate grade level, were provided at every session (Appendix I). Prior to reading the daily assigned paragraph, the following questions were asked:

1. Who is the paragraph about?

2. What is happening?

3. Where is it happening?

4. When is it happening?

5. Why is it happening?

After reading, answers to the questions were underlined and marked by type of question. This technique was used at each session as an enabling activity to develop comprehension skills. Proficiency in determining answers to each type of question was increased gradually.

In addition to the specific individualized program for each student, all students were provided with an assortment of instructional materials. Flash cards, worksheets, electronic instructional materials, and manipulatives were used on a regular basis. Varying techniques and materials enabled students to enjoy the sessions while improving reading comprehension skills.

CHAPTER IV

Results

Students' posttest scores as outlined in Table II (Appendix J) indicate that the outcome objectives were achieved. Using precision teaching, a variety of instructional methods, and recognizing individual student learning style preferences kept students interested, motivated, and willing to strive for skill mastery.

Objective 1

Ann, Craig, Jennifer, and Kelly were able to master the targeted skill of locating a stated main idea of a paragraph on their respective reading levels. Ann progressed slowly in mastering this skill. At the beginning of the sessions, Ann was unable to correctly choose the main idea of a paragraph. However, after several weeks, scores were steadily increased and a mastery level was reached at the end of the 16 weeks.

Initially, Craig was also unable to achieve mastery level in locating the stated main idea of grade level material. However, progress varied at each session. Results from the original timing disclosed an inability to correctly identify any main ideas. After a few sessions, this skill was mastered at the fourth grade

level and fifth grade reading level materials were introduced. The first few timings at this level resulted in several errors. As experience was gained, "locating the main idea" scores were quickly increased. At the end of the sessions, a mastery level on fifth grade reading material was reached.

Jennifer's initial timing on locating the main idea resulted in a perfect score. Rather than changing the targeted skill the level of difficulty was increased. Beginning scores on fourth grade material resulted in low scores. Scores were then gradually increased each week until mastery level was achieved.

Kelly's progress in locating the stated main idea of a paragraph was similar to that of Jennifer's. The initial timing on fourth grade material resulted in a perfect score. The level of skill difficulty was then increased. On the first timing in the more difficult material, two items were correctly identified with two errors. Scores were gradually increased each session until mastery level of the targeted skill was achieved. The use of questioning techniques greatly assisted students in achieving mastery level in locating the main idea.

Objective 2

Increasing reading fluency was the targeted skill for Ann, Kit, and Jennifer at their respective grade levels. A variety of reading materials was chosen to develop Ann's reading fluency. Scores were maintained for several weeks without much improvement. However, at the last few sessions the scores increased until mastery level was achieved. A mastery level was reached by using kina-writing and flash cards to assist with the unknown words.

Kit's reading fluency did not improve a great deal during the first few weeks. After the third week however, reading fluency was attained with a score of 133 words correct and one error. Skill mastery was achieved.

Jennifer was originally placed in third grade reading materials to develop reading fluency. Mastery scores were surpassed with a final score of 206 words correct. Therefore, the level of skill difficulty was increased. This score improved only slightly for several weeks. During the last few weeks of the program, a mastery level was achieved with a final score of 152 correct and zero errors. The use of NIM and

kina-writing were effective strategies in improving students' reading fluency.

Objective 3

Reading selections and then paraphrasing them was another of Kit's targeted skills. At each session, a short story was read and the story's main idea and several details were listed using R.A.P. At the next session, the story was re-read and paraphrased within five minutes. Every two sessions a new story was introduced. Progress was slow and a great deal of difficulty was experienced in locating and restating details to support the main idea. During the first four sessions, the main idea and only two to four supporting details were stated. However, at each subsequent session one more detail was added within the five minute timing. Although mastery level of stating eight to nine items in five minutes was not achieved, the goal was eminent. If the implementation period had continued a mastery level in paraphrasing would have been achieved. The R.A.P. technique was an effective method in developing paraphrasing skills.

Objective 4

Craig was the only student whose targeted skill was locating specific context clues. It was determined that

a great deal of remediation and practice was needed in locating context clues in order to reach a mastery level. Each week the number of correct responses was increased by one item. This gradual increase was maintained throughout the program. Although mastery level was not achieved, some progress was made. Ending scores resulted in 11 items correct with zero errors. Questioning techniques and dictionary usage assisted Craig in his ability to identify context clues.

Although all students in the group did not reach the anticipated mastery level for each targeted skill, most students did progress to some degree. By utilizing precision teaching, students were able to see their daily improvement and strive to increase their scores. Precision teaching motivated and challenged the students.

Objective 5

Progress was also made by the researcher. A pretest score of 30 and a posttest score of 100 resulted in a 70 point increase. The writer's objective of a 50 point increase was achieved.

This practicum proved to be a learning experience for the students as well as the practicum writer. The experience provided the opportunity to utilize precision

teaching and realize how it can be adjusted for use in either a small or large group situation. In addition to becoming familiar with the precision teaching technique, an understanding of new teaching strategies and materials for use in a regular classroom setting was gained.

CHAPTER V

Recommendations

After analyzing the results of the practicum, several recommendations can be made with regard to individual student's progress, methods of instruction, and instructional materials in reading comprehension and reading fluency. Four of the five students in the target group received remediation in locating the stated main idea of a paragraph. Although all of the students were successful and reached mastery level, other methods and materials could have been used to teach the skill. More manipulative, hands-on activities would have been beneficial and possibly would have increased students' interest. However, due to time constraints, it was difficult to prepare teacher made instructional materials for all skills. Also, a great deal of commercially prepared manipulative materials to teach this skill were not available. As a subsequent skill to developing the stated main idea of a paragraph, the four students should focus on creative writing exercises such as writing their own stories to include a main idea and several supporting details.

The Neurological Impress Method (NIM) to develop reading fluency was positively received by the students.

The use of this technique enabled all three students to achieve mastery level. It is recommended that NIM be continued in tutorial sessions and in each student's regular classroom. Although NIM is a one-on-one instructional approach, it can be adapted for use within the regular classroom setting. Teacher aides, students, and parent volunteers could be inserviced in this method to assist individual students as needed.

Although Kit demonstrated progress in his ability to paraphrase short stories, it is recommended that additional remediation in this skill be continued. Paraphrasing material in specific content areas such as science and social studies would reinforce this skill and provide better understanding of the content in these two subject areas.

Craig demonstrated progress in identifying specific context clues. However, continued work on this skill is necessary in order to achieve mastery level. It is recommended that in addition to working on reading related material to develop context clues, material from other subjects should also be used. This would allow the development of content vocabulary and identification of unfamiliar words encountered in these other subjects.

Precision teaching can be adapted for use in the regular classroom setting. Since the writer was

impressed with precision teaching and with the impact it had on the target students, this measurement system will be recommended to other classroom teachers. Skill centers could be set up in the regular classroom and students could take turns "visiting" these centers during reading seatwork time. After preparing individual student folders containing a task sheet and charts for each member of the class, students could then be assigned to a skill station. Each skill station could have stop watches, probes, and enabling activities. The classroom teacher could pair up two students to work at these skill stations several times per week. This system would motivate students to increase their scores and would provide a variety of materials to spark students' interest in learning.

Developing reading comprehension in low achieving students requires mastery of many different skills. The use of a variety of instructional materials and techniques to meet individual student learning styles was an important factor for success. The use of NIM, kina-writing, and questioning techniques facilitated students' progress and mastery of the targeted skills.

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Appendices

APPENDIX A

TABLE I

Pretest Scores of Target Group

Student	Skill	Level	Number Correct	
			Pretest	Mastery Level
Ann S.	Main Idea	5	0	5
	Reading Fluency	5	98	130-150
Kit S.	Paraphrasing	8	3 (5 min)	8-9
	Reading Fluency	8	93	130-150
Craig K.	Context Clues	5	6	18-20
	Main Idea	5	0	5
Jennifer S.	Reading Fluency	4	78	130-150
	Main Idea	4	1	5
Kelly J.	Main Idea	4	2	5

Appendix B

Sample Task Sheet

TASK SHEET

Name KIT S.

Date May 30, 1989

		Done
1	Outline Worksheets Nos. 62 & 69	☑
•2	See-Write Outline AIM 12	☑
•3	See Story - Read: The Ugly Duckling AIM 135	☑
4	R. A. P. Bills and Beaks	☑
•5	See Story- Paraphrase Bills and Beaks AIM 8	☑
6	Vocabulary Cards Match	☑
•7	See- Match Vocabulary AIM 15	☑
8	Spelling Scrabble Letters	☑
•9	Hear Word- Write AIM 100	☑
10		☐
11		☐
12		☐

Appendix C

Sample Probe

SEE STORY / READ

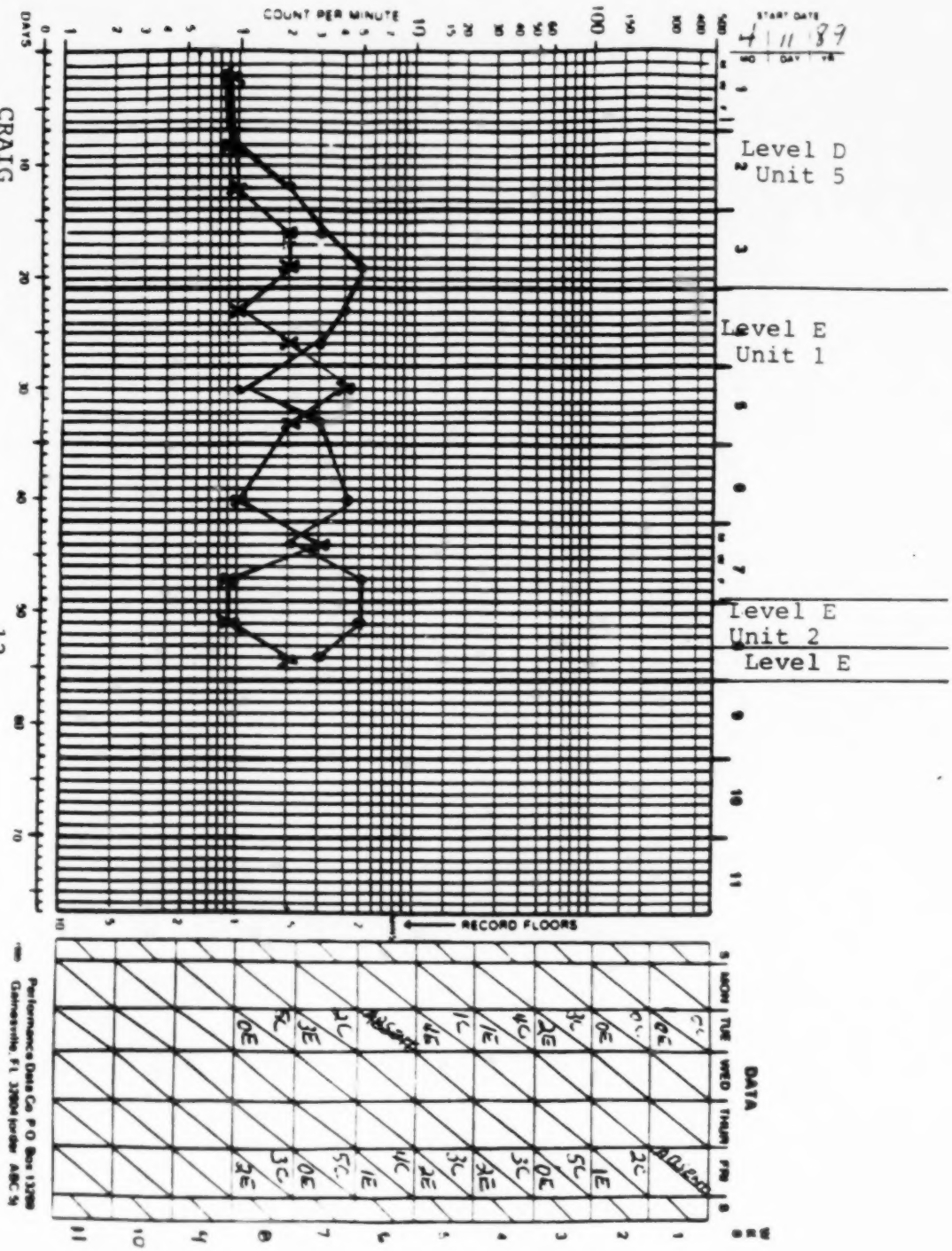
All Upon A Stone

Jean Craighead George

In the woods by a stream lies an old, worn	10
stone. It is big as a bear and gray as a rain	12
cloud.	1
Moss gardens grow on its ridges and	7
humps. Ferns cast shadows of lace on its sides.	9
A puddle of water lies like a lake near its top,	11
and butterflies sit nearby.	4
A stone by a stream in the woods is like a	11
tiny country. It has its own forests, valleys, and	9
pools. It has its own creatures that live out	9
their lives—hunting, sleeping, and working	6
—all upon a stone.	4
A summer day dawns.	4
Deep under the stone a mole cricket	7
moves. Fuzzy hairs cover his back—like fur.	8
His feet are small shovels that dig the soil as	10
he hunts for food.	4
As he works by himself in the ground	8
under the stone, he breathes through his belly.	8
He hears with his knees, smells with his	8
antennae, and sees through the thousands of	7
parts of his eyes.	4
Since his hatching in spring, his knees have	8
never heard another mole cricket. His antennae	7
have never smelled one.	4

Appendix D

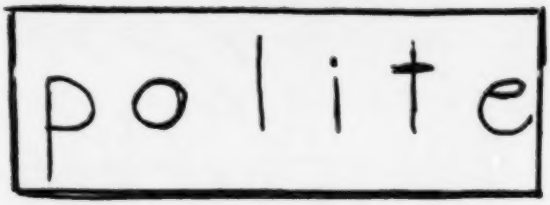
Logarithmetic Chart



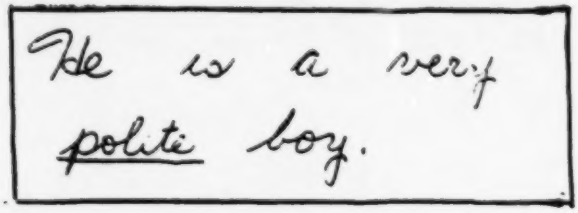
Appendix E

Kina-writing

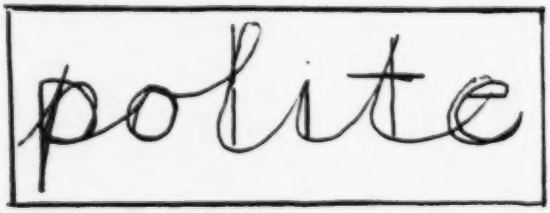
1. The unknown word is copied in exaggerated form for the student on a 4 1/2 X 11 inch strip of white tagboard.



2. The student writes a sentence using the unknown word on the back of the card.



3. The student traces the word on the reverse side of the card 3 times while saying the word aloud.



4. The student writes the word on the chalkboard with eyes closed.

Appendix F

R.A.P. Technique

R A P

R - Read two paragraphs

A - Ask yourself what you just read

P - Put in your own words

Appendix G

Short Story for Paraphrasing

Cats are clean animals and easy to housebreak. A shallow pan or box can be covered with an inch or so of sand, sawdust, or litter. Litter can be bought at pet stores, supermarkets, and hardware stores. The pan should always be in the same place.

To teach a cat, one must watch him carefully. When he begins to search for one place after another, he must be put into his pan. The litter must be changed often, and the pan must be washed with soap and water every few days.

A cat will scratch to wear off his old claws. He will need a scratching post to reduce damage to furniture. Every time the cat claws at the furniture, the scratching post should be pointed out to him until he learns to use it without help.

A cat enjoys a soft ball, a toy mouse, or some other kind of toy. Such objects should be too large for the cat to swallow.

Most cats enjoy playing. They are independent animals, however, and play only when they feel like it.

Most cats refuse to be disciplined although they may understand "no." They learn their names quickly, and many will come when called. If a cat is told what to do and he likes the trick, he will learn to do it.

A cat should be confined to the house, especially at night. Cats that are allowed to roam disturb the neighbors with their crying and fighting. A female cat should never be allowed to roam during her mating season.

Proper care usually will eliminate the threat of disease or injury. Unusual symptoms should be watched for, and visits to the veterinarian should be regular. A cat must be vaccinated early against rabies and other serious diseases.

A cat will lick his fur to clean it. As he licks it, he will swallow hairs that form little felt-like balls in his stomach and intestines.

Although hair balls can be prevented by brushing a cat daily, some will form anyway. A veterinarian can prescribe a remedy to help a cat eliminate the hair.

A cat should never be dropped because he can be seriously injured. Cats do not always land on their feet as many people think.

Appendix H

Context Clue Lesson

SEE SENTENCE/MARK CONTEXT CLUE

1. Tim, who studies the stars, was interested in astronomy.
2. The moon has many craters or holes made by meteors.
3. The path around the park is circular.
4. The aliens seemed strange at first, but then we got used to them.
5. A car, a baby carriage, and a wagon are all vehicles.
6. That new crossing guard is a trainee who is learning his job .
7. The linguists could each speak five languages.
8. The mathematicians were able to solve the difficult problem.
9. At first the sick man spoke in an incoherent manner. It was several hours before he began to make sense.
10. The famine caused much suffering. Hundreds of people starved to death.
11. Beverly watched the minnows all morning. The small silver fish barely moved.
12. The group of birds flew over my house. Then the flock landed on the pond.

SEE CIRCLE MAIN IDEA

Unit 1

Level C

1. Can you stand on your head? Many people can. Some can stand on their hands. One man who worked in a circus could do something much more difficult. He stood upside down, but not on his head or hands. He stood upside down on only one finger. His name was Unus.

1. The story mainly tells:
   (A) What Unus did
   (B) How to do a good trick
   (C) How to stand upside down

---

2. A baby oyster is the size of a pinpoint. It takes a month for it to grow to the size of a pea. In one year it is as big as a quarter. From then on, the oyster grows about an inch a year for three or four years.

2. The story mainly tells:
   (A) How fast oysters grow
   (B) What oysters are like
   (C) Why oysters grow so fast

---

3. Hundreds of years ago, lead pencils were actually made of lead. Today they are made of graphite. Graphite makes a much darker mark than lead. It lasts a long time too. A pencil has enough graphite in it to draw a line thirty-one miles long.

3. The story mainly tells:
   (A) How pencils were invented
   (B) Why pencils are made of graphite
   (C) Who discovered graphite

---

4. Most small land birds fly about twenty-five miles per hour. Ducks and geese fly about forty miles per hour. Eagles have been known to fly over one hundred miles an hour. Swifts have been timed at almost two hundred miles per hour.

4. The story mainly tells:
   (A) How fast birds fly
   (B) How fast robins fly
   (C) Why birds fly so fast

---

5. Wouldn't it be terrible if we didn't have grass? We would have to walk on bare soil. Can you guess what our playgrounds would look like? On a rainy day we would get all muddy. On a dry day we would breathe clouds of dust.

5. The story mainly tells:
   (A) Why we need rain
   (B) How grass is kept green
   (C) How grass helps us

APPENDIX J

TABLE II

Posttest Scores of Target Group

Student	Skill	Level	Number Correct	
			Posttest	Mastery Level
Ann S.	Main Idea	5	5	5
	Reading Fluency	5	184	130-150
Kit S.	Paraphrasing	8	7	8-9
	Reading Fluency	8	133	130-150
Craig K.	Context Clues	5	11	18-20
	Main Idea	5	5	5
Jennifer S.	Reading Fluency	4	152	130-150
	Main Idea	4	5	5
Kelly J.	Main Idea	4	5	5